Bayer CropScience

EPA Correspondence No. 06-01A
March 22, 2006

Ms. Sherrie Kinard, Chemical Review Manager
Special Review and Reregistration Division (7508C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
1801 South Bell Street
Arlington, Virginia 22202

Re: Submission of Studies to Determine Aldicarb Residues in Drinking Water from Groundwater Wells

Dear Ms. Kinard:

Bayer CropScience
2 T.W. Alexander Drive
P. O. Box 12014
Research Triangle Park, NC 27709
Tel: 919 549-2000

EFED's preliminary risk assessment for aldicarb, dated June 28, 2001, indicated there was a lack of current monitoring data for aldicarb residues in drinking water from private wells and that high concentrations of aldicarb occur in most regions of the country. Although the groundwater discussion was not included in EFED's Phase 3 risk assessment for aldicarb, dated May 31, 2005, it was repeated in HED's preliminary risk assessment for aldicarb, dated June 29, 2005.

As Bayer previously disagreed with EFED's selection of the groundwater concentrations that were used in the drinking water assessment (our response to EFED's preliminary risk assessment for aldicarb, dated August 31, 2001), we determined it was necessary to obtain current data reflective of actual residues of aldicarb in drinking water from private wells. In 2005 we initiated an extensive monitoring program that would determine aldicarb residues in about 2000 private wells located in areas where TEMIK® was known to be used.

Five regional U.S. potable well monitoring studies (Pacific Northwest, California, Texas, Mississippi Delta, and the Southeast) were conducted in 2005 to provide an estimate of dietary exposure to aldicarb carbamate residues (parent aldicarb and its two carbamate metabolites aldicarb sulfone and aldicarb sulfoxide) in potentially vulnerable drinking water sources. In these studies samples were analyzed from 1674 drinking water wells in nine major use areas, which were within 1000 feet of fields treated at least once with TEMIK® brand 15G Aldicarb Pesticide between 2002 and 2005.

Analyses were performed with an HPLC/MS/MS analytical method with limits of quantitation of (LOQ) 0.021 µg/L (ppb) for parent aldicarb and aldicarb sulfone and 0.027 µg/L for aldicarb sulfoxide. The method detection limit (MDL) was 0.0070 µg/L for parent aldicarb and aldicarb sulfone and 0.0090 µg/L for aldicarb sulfoxide. The analysis of samples when parent aldicarb or when only aldicarb sulfoxide or only aldicarb sulfone was detected was confirmed by a second HPLC/MS/MS analysis using alternate monitoring ions.

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Samples from 1514 of the 1674 wells with confirmed treatments within 1000 feet during 2002-2005 contained no aldicarb carbamate residues. Only 11 wells had total aldicarb carbamate residues above 1 µg/L, the maximum being 2.9 µg/L. All residues were below the U.S. EPA Health Advisory Limit of 10 µg/L.

Three copies each of the Transmittal Document and six studies are submitted with this letter.

Please phone me at 919-549-2870 or email me at larry.hodges@bayercropscience.com if you have any questions regarding this submission.

Sincerely,

Larry R. Hodges

Larry R. Hodges, Ph.D.
Registration Manager, Insecticides

TRANSMITTAL DOCUMENT

TEMIK® brand 15G Aldicarb Pesticide
(EPA Registration Number 264-330)

Groundwater Monitoring Studies

6 DOCUMENTS

TRANSMITTAL DATE

March 22, 2006

Company Official: L. R. Hodges **(Signature)**

Company Name: Bayer CropScience

Company Contact: Larry R. Hodges **(Name)**

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BIBLIOGRAPHY OF SUBMITTED DATA

MRID Number 46793701

Jones, R.L., and T.S. Ramanarayanan. 2006. TEMIK® brand 15G Aldicarb Pesticide: Summary of Five Retrospective Ground Water Monitoring Studies Conducted for Aldicarb and Its Metabolites in the Pacific Northwest, California, Texas, Mississippi Delta and the Southeast Regions of the United States in 2005. Bayer CropScience, Stilwell, KS. Study No. RAAVY010. March 20, 2006. 21 Pages Plus a 6 Page Confidential Attachment.

MRID Number 46793702

Freeseman, P.L., R.L. Jones, R.E. Lee. U.B. Nandihalli and D.R Wyatt. 2006. A Retrospective Groundwater Monitoring Study for Aldicarb and Its Metabolites in the Pacific Northwest. Bayer CropScience, Stilwell, KS. Study No. RAAVY005. February 16, 2006. 1033 Pages.

MRID Number Reject (03)

Lenz, M., R. L. Jones, D. R. Wyatt, U. B. Nandihalli, and R. E. Lee. 2006. A Retrospective Groundwater Monitoring Study for Aldicarb and its Metabolites in California. Bayer CropScience, Stilwell, KS. Study No. RAAVY006. March 20, 2006. 767 Pages.

MRID Number 46793704

Mosier, D.G., R.L. Jones, U.B. Nandihalli, and R. Lee. 2006. A Retrospective Groundwater Monitoring Study for Aldicarb and its Metabolites in Texas. Bayer CropScience, Stilwell, KS. Study No. RAAVY007. February 17, 2006. 749 Pages.

MRID Number 46793705

Wyatt, D.R., R.L. Jones, U.B. Nandihalli, and R.E. Lee. 2006. A Retrospective Groundwater Monitoring Study for Aldicarb and its Metabolites in the Mississippi Delta Region. Bayer CropScience, Stilwell, KS. Study No. RAAVY008. February 20, 2006. 690 Pages.

MRID Number 46793706

Lee, R. E., R. L. Jones, D. R. Wyatt, and U. B. Nandihalli. 2006. A Retrospective Groundwater Monitoring Study for Aldicarb and its Metabolites in the Southeastern United States. Bayer CropScience, Stilwell, KS. Study No. RAAVY009. March 16, 2006. 2955 Pages.